Transformations of Quadratics $y = x^2 + k$ **and** $y = ax^2 + k$

Date: _____

EX: **Sketch the graphs of the functions on the same axis.**

A. $y = x^2$ **B.** $y = x^2 + 3$ **C.** $y = x^2 - 5$

In general for $y = x^2 + k$**:**

If k is positive, the vertex is translated vertically up k units.
If k is negative, the vertex is translated vertically down k units.

EX: **Without using a table of values, graph the following:**

A. $y = x^2 - 4$ **B.** $y = -2x^2 + 3$